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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/544,110

08/02/2005

Norbert Weber

48799

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1609 7590 06/05/2007
ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.
1300 19TH STREET, N.W.
SUITE 600
WASHINGTON,, DC 20036

EXAMINER

HOOK, JAMES F

ART UNIT

PAPER NUMBER

3754

MAIL DATE

DELIVERY MODE

06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/544,110

Applicant(s)

WEBER ET AL.

Examiner

James F. Hook

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/2/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yuda (WO 02/12731).

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yuda (EP 1,308,634).

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Simmonds (FR 985,370).

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rauh (DE 739,831).

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor. The patent to Taylor discloses the recited piston type accumulator comprising a housing 11 in the form of a cylindrical tube having a separating piston 13 which separates two working chambers from each other, the piston may be moved in the axial direction within a piston stroke area of the cylindrical tube which is closed off at both ends by a closing component 12 one end of which is closed by shaping a reshaping area near reference number 14, the wall of the cylindrical tube adjoining the piston stroke area as an integral component of such wall is provided in the interior of the cylindrical tube at

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the point of transition from the piston stroke area to the reshaping area with a stop element restricting the movement of the piston before the reshaping area is reached, the stop element is seen in the figure to be locked positively against axial movement by retaining surfaces present on the inside wall of the cylindrical tube as such is part of the wall therefore axial movement would be locked, where such is formed by a shoulder forming a recess in the inner wall below where the shoulder extends out, and the shaping of the wall of the closing component forms a second retaining portion in that such extends inward from the shoulder portion just above the shoulder.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Gratzmuller. The patent to Gratzmuller discloses the recited piston type accumulator comprising a housing 1 in the form of a cylindrical tube having a separating piston 13,6,2 which separates two working chambers from each other, the piston may be moved in the axial direction within a piston stroke area of the cylindrical tube which is closed off at both ends by a closing component 3 one end of which is closed by shaping a reshaping area near the top of the cylindrical tube, the wall of the cylindrical tube adjoining the piston stroke area as an integral component of such wall is provided in the interior of the cylindrical tube at the point of transition from the piston stroke area to the reshaping area with a stop element restricting the movement of the piston before the reshaping area is reached, the stop element is seen in the figure to be locked positively against axial movement by retaining surfaces present on the inside wall of the cylindrical tube as such is part of the wall therefore axial movement would be locked, where such is formed by a shoulder forming a recess in the inner wall below where the

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shoulder extends out, and the shaping of the wall of the closing component forms a second retaining portion in that such extends inward from the shoulder portion just above the shoulder.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Michael.

The patent to Michael discloses the recited piston type accumulator comprising a housing 13 in the form of a cylindrical tube having a separating piston 29 which separates two working chambers 28,31 from each other, the piston may be moved in the axial direction within a piston stroke area of the cylindrical tube which is closed off at both ends by a closing component near 17 one end of which is closed by shaping a reshaping area near the top of the cylindrical tube, the wall of the cylindrical tube adjoining the piston stroke area as an integral component of such wall is provided in the interior of the cylindrical tube at the point of transition from the piston stroke area to the reshaping area with a stop element restricting the movement of the piston before the reshaping area is reached, the stop element is seen in the figure to be locked positively against axial movement by retaining surfaces present on the inside wall of the cylindrical tube as such is part of the wall therefore axial movement would be locked, where such is formed by a shoulder forming a recess in the inner wall below where the shoulder extends out, and the shaping of the wall of the closing component forms a second retaining portion in that such extends inward from the shoulder portion just above the shoulder.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bizak.

The patent to Bizak discloses the recited piston type accumulator comprising a housing

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10 in the form of a cylindrical tube having a separating piston 48 which separates two working chambers from each other, the piston may be moved in the axial direction within a piston stroke area of the cylindrical tube which is closed off at both ends by a closing component 15 one end of which is closed by shaping a reshaping area near the top of the cylindrical tube 28, the wall of the cylindrical tube adjoining the piston stroke area as an integral component of such wall is provided in the interior of the cylindrical tube at the point of transition from the piston stroke area to the reshaping area with a stop element restricting the movement of the piston before the reshaping area is reached, the stop element is seen in the figure to be locked positively against axial movement by retaining surfaces present on the inside wall of the cylindrical tube as such is part of the wall therefore axial movement would be locked and the end having the reshaping area, where such is formed by a shoulder forming a recess in the inner wall below where the shoulder extends out, and the shaping of the wall of the closing component forms a second retaining portion in that such extends inward from the shoulder portion just above the shoulder, the stop element is formed as a plate 46 provided with a hole in the center thereof, where the plate is level and can have a crowned or convex surface extending toward the reshaping area.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yudas (WO 02/12731) in view of Yost. The reference to Yudas discloses all of the recited structure with the exception of forming the stop element as a circular cross sectioned element that locks into the shoulder area to form a cambered partial surface of a seat for the annular element. The patent to Yost discloses that it is old and well known in the art to provide a cambered partial surface seat to receive a lock element 66' to retain the piston in a specific stroke area. It would have been obvious to modify the wall of Yudas to have a cambered partial surface seat to receive a circular cross sectioned element to retain the piston in a specific stroke area as suggested by Yost where such is an equivalent manner to restrain the movement of the piston as known in the art of accumulator structures and would be cheaper to manufacture than a plate like element thereby saving money.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yudas (EP 1,308,634) in view of Yost. The reference to Yudas discloses all of the recited structure with the exception of forming the stop element as a circular cross sectioned element that locks into the shoulder area to form a cambered partial surface of a seat for the annular element. The patent to Yost discloses that it is old and well known in the art to provide a cambered partial surface seat to receive a lock element 66' to retain the piston in a specific stroke area. It would have been obvious to modify the wall of Yudas to have a cambered partial surface seat to receive a circular cross sectioned element to retain the piston in a specific stroke area as suggested by Yost where such is an

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equivalent manner to restrain the movement of the piston as known in the art of accumulator structures and would be cheaper to manufacture than a plate like element thereby saving money.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bizak in view of Yost. The reference to Bizak discloses all of the recited structure with the exception of forming the stop element as a circular cross sectioned element that locks into the shoulder area to form a cambered partial surface of a seat for the annular element. The patent to Yost discloses that it is old and well known in the art to provide a cambered partial surface seat to receive a lock element 66' to retain the piston in a specific stroke area. It would have been obvious to modify the wall of Bizak to have a cambered partial surface seat to receive a circular cross sectioned element to retain the piston in a specific stroke area as suggested by Yost where such is an equivalent manner to restrain the movement of the piston as known in the art of accumulator structures and would be cheaper to manufacture than a plate like element thereby saving money.

Conclusion

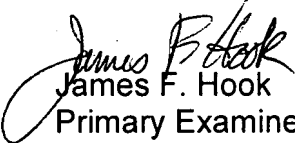
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Rehbock, Bauer, Hertell, and Weber disclosing state of the art accumulator structures with moving pistons.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


James F. Hook
Primary Examiner
Art Unit 3754

JFH